

VALIDATION OF CURCUMINOID EXTRACT CURCUMA RHIZOME (*Curcuma Xanthorrhiza* Roxb) AS AN ACID BASE INDICATOR

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ABSTRACT

This research aims as knew the characterization and validation of curcuminoid extract as an acid base. The character was determined includes: stability to storage time, color changes at pH range, pH range, maximum wavelength and pK values. The validity was the precision and accuracy of the use of curcuma rhizome extract as an indicator of acid-base titration. Curcuminoid extraction from curcuma rhizome was carried out by maceration in 24 hour. Stability of curcuminoid extract for storage time was observed for 5 day. The colour change of curcuminoid extract at various pH was observed visually and spectrophotometry. The indicator value was obtained from absorbance data of standard curcumin at various pH. The level of precision and accuracy were determined in the titration of weak acid – strong base and titration weak acid - weak base. The level of precision was expressed by the standard deviation, while the level of accuracy was expressed by % relative error. Based on the results of the study conclude that: (1) curcuminoid extract change pH range after storage for 5 days, (2) the colour of curcuminoid change extract is from yellow to orange, (3) pH range for (1:8) and (1:4:4) are 8,5-9 and 9,5-10 respectively, (4) the wavelengths (1:8) was 463 nm and (1:4:4) was 558 nm, (5) the values pK indicator standard curcumin was 7,7456, (6) standard curcumin and curcuminoid extract curcuma rhizome (1:8) and (1:4:4) was presicion as indicator, (7) and has high accuracy.

Kata Kunci: *curcuminoid curcuma rhizome, indicator pK value, titration acid base, precision, accuracy*